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submit that claims 1 and 3-6 are in allowable form and hereby request the withdrawal of this particular rejection.

Responsive to the rejection of claims 3-6 under 35 U.S.C. § 112, 2nd paragraph, Applicants have amended claims 3-6, keeping in mind the comments offered by the Examiner. Thus, Applicants submit that claims 3-6 are now in allowable form and respectfully request the withdrawal of the rejection thereof under 35 U.S.C. § 112, 2nd paragraph.

Responsive to the rejection of claims 8 and 9 under 35 U.S.C. § 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 4,593,168(Amada); the rejection of claim 8 under 35 U.S.C. § 102(e) as being anticipated by or, in the alternative under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 6,001,175 (Maruyama et al.); claim 8 under 35 U.S.C. § 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 5,226,383 (Bhat); and claim 9 under 35 U.S.C. § 103(a) as being unpatentable over Bhat in view of U.S. Patent No. 4,979,466 (Nishitani et al.), U.S. Patent No. 5,174,825 (White, Jr. et al.), and U.S. Patent No. 5,273,588 (Foster et al), Applicants have amended claim 8 and submit that claims 8 and 9 are now in condition for allowance.

Claim 8 recites in part:

> ...said floating means including a plurality of floatation pores, a plurality of rotational pores, and a plurality of vibration suppression pores therein, said floatation pores, said rotational pores, and said suppression pores <u>each being positioned and directed so as to promote one of</u> floatation, rotation, and vibration suppression, <u>respectively</u>, via air flow control...

Applicants submit that such an invention is neither taught, disclosed, nor suggested by any of the cited references alone or in combination. Specifically, none of the cited references discloses or suggest <u>three distinctly different</u> pore sets, one each of these pore sets being

specifically positioned and directed so as to promote one of floatation, rotation, and vibration suppression, respectively. Therefore, the cited references, alone or in combination, fail to teach or suggest the invention as set forth in claim 8, as amended. For all the foregoing reasons, Applicants submit that claim 8, and claim 9 depending therefrom, are now in condition for allowance and hereby respectively request the withdrawal of the above cited rejections of claims 8 and/or 9.

Responsive to the rejection of claims 1-7 under 35 U.S.C. § 102(b) as being anticipated by or, in the alternative under 35 U.S.C. § 103(a) as being obvious over JP 59-215718 (Hiura) and under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,005,226 (Aschner et al.), Applicants have amended claims 1 and 3-7 and have cancelled claim 2. Applicants submit that claims 1 and 3-7 are now in condition for allowance.

Claim 1 recites in part:

> ...wherein all pore types of said fine floating pores, said fine centering pores, said fine rotational pores, and said auxiliary fine suppression pores are provided on a surface of said floating unit and are inclined against the surface of said floating unit, an air flow being injected into said all pore types in a direction of the inclination.

Applicants submit that such an invention is neither taught, disclosed, nor suggested by Hiura, Aschner et al, or any of the other cited references, alone or in combination. Specifically, neither Hiura nor Aschner et al discloses a combination of four distinct types of pores: fine floating pores, fine centering pores, fine rotational pores, and auxiliary fine suppression pores, all of which are inclined against a surface of the floating unit, as set forth in claim 1, as amended. For all the forgoing reasons, Applicants submit that claim 1, and claims 3-6 depending therefrom, are now in condition for allowance and hereby respectfully request the withdrawal of the rejections based upon Hiura and/or Aschner et al.

Claim 7 recites in part:

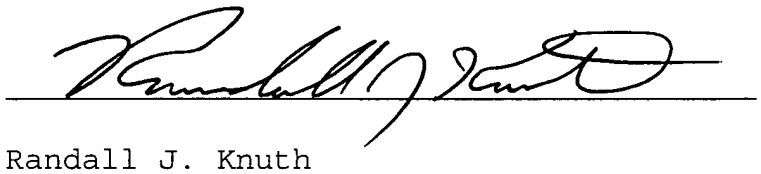
> ...said floating means including a plurality of floatation pores, a plurality of rotational pores, and a plurality of vibration suppression pores therein, said floatation pores, said rotational pores, and said suppression pores being positioned and directed so as to promote one of floatation, rotation, and vibration suppression, respectively, via air flow control...

Applicants submit that such an invention is neither taught, disclosed, nor suggested by Hiura, Aschner et al, or any of the other cited references, alone or in combination. Hiura discloses floating gas outlets 5, positioning gas outlets 4, and rotating gas outlets 6, but does not suggest the use of gas outlets that are specifically positioned and directed so as to promote vibration suppression. The various embodiments of Aschner et al disclose the use of gas flow channels (e.g., 320, 820) for delivery a flowing gas (e.g., 340) that both rotates and supports wafer 110. Aschner et al does not, however, disclose or suggest separate sets of flow channels that are positioned and directed so as to promote one of floatation, rotation, and vibration suppression, respectively. Therefore, each of Hiura and Aschner et al fails to teach or suggest the invention as set forth in claim 7, as amended. For the forgoing reasons, Applicants submit that claim 7 is now in condition for allowance and hereby respectively request withdrawal of the rejections thereof based upon Hiura and Aschner et al.

Further, Applicants submit that the details of the dependent claims 3, 5, and 6 specifically, are clearly neither taught nor suggested by Hiura and/or Aschner et al. Thus, claims 3, 5, and 6 are allowable on their own merits, in addition to being dependent on allowable claim 1.

If the Examiner has any questions or comments that would speed prosecution of this case, the Examiner is invited to call the undersigned at 260/485-6001.

Respectfully submitted,



Randall J. Knuth
Registration No. 34,644

RJK/ste10

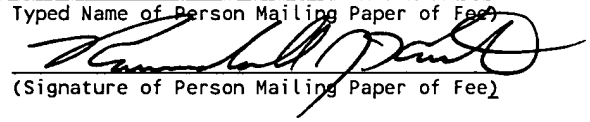
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Randall J. Knuth, Registration No. 34,644
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(Signature of Person Mailing Paper of Fee)

RANDALL J. KNUTH, P.C.
3510-A Stellhorn Road
Fort Wayne, IN 46815-4631
Telephone: 260/485-6001
Facsimile: 260/486-2794

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MARKED-UP CLAIMS

Please amend claim 1 as follows:

1. A substrate body-floating apparatus for blowing an air flow into a rear surface of a disk-shaped substrate body to float and rotate the substrate body comprising:

a floating unit having a surface with a plurality of [one or more] fine floating pores configured for floating the substrate body, [one or more] a plurality of fine centering pores configured for centering the substrate body at a center of a substrate body-floating apparatus, a plurality of [one or more] fine rotational pores configured for rotating the substrate body at a center of said apparatus, and a plurality of [one or more] auxiliary fine suppression pores configured for suppressing vibration of the substrate body when the substrate body is rotated at a high speed, wherein all pore types of said fine floating pores, said fine centering pores, said fine rotational pores, and said auxiliary fine suppression pores are provided on a surface of said floating unit and are [inclined against the surface of said floating unit, an air flow being injected into said all pore types in a direction of [the inclination.]]

Please amend claim 3 as follows:

3. The substrate body-floating apparatus according to claim 1 [2] wherein [said plurality of [one or more] fine floating pores configured for floating the substrate body crosses a rotation axis of

the substrate body [and] a surface of said floating unit [is] being divided into four quadrants [areas by an angular space of 90 degrees], a plurality of [said one or more] said fine floating pores [for floating] being [are] provided in each quadrant, each said fine floating pore within one said quadrant having a same floating pore direction, said same floating pore direction being [one area that is] parallel to a diagonal line of said one said quadrant, said diagonal line being [each area and] oriented to a center of said floating unit.

Please amend claim 4 as follows:

4. The substrate body-floating apparatus according to claim 1 [2] wherein said plurality of [one or more] fine centering pores for centering are located [one of 1/2 at positions] on an outer periphery of the substrate body and [, or] on an outer side from the outer periphery, each said fine centering pore being angularly displaced relative to each adjacent said fine centering pore [at an angular spacing relative to one another], [and] said plurality of [one or more] fine centering pores [for centering] each having a fine centering pore [orientation associated therewith] each said fine centering pore orientation being directed toward [are oriented to] a center of said floating unit.

Please amend claim 5 as follows:

5. The substrate body-floating apparatus according to claim 1 [2] wherein said plurality of [one or more] fine rotational pores

[for rotating] are located at positions [away from a tangential line to] on a circle with a radius smaller than the radius of the substrate body and centered around a center of a surface of said floating unit, [and] said adjacent [one or more] fine rotational pores [for rotating] being directed away from one another [are oriented to] in [an] opposite tangential directions [direction].

Please amend claim 6 as follows:

6. The substrate body-floating apparatus according to claim 1 [2] where said plurality of [one or more] auxiliary fine suppression pores each have an auxiliary fine suppression pore orientation, each said auxiliary fine suppression pore orientation being [are] directed toward [oriented to] a center of said floating unit, each said fine auxiliary pore being [and] located on a periphery of a circle extending beyond [from] the position of said plurality of [one or more] fine rotational pores, said circle being concentric with [for rotating from] a center of said floating unit, said fine suppression pore orientations of adjacent said auxiliary fine suppression pores [at an angular space of] being angled at 90 degrees relative to one another [therebetween].

Please amend claim 7 as follows:

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7. A substrate body-floating type of heater comprising:

a floating means for applying air to a rear surface of a substrate body to float, rotate and suppress vibration to the substrate body, said floating means including a plurality of

floatation pores, a plurality of rotational pores, and a plurality of vibration suppression pores therein, said flotation pores, said rotational pores, and said vibration suppression pores being positioned and directed so as to promote one of floatation, rotation, and vibration suppression, respectively, via air flow control; and

an optical lamp for heating a surface of the substrate body.

Please amend claim 8 as follows:

8. A substrate body-floating type of film-forming apparatus comprising:

a floating means for applying gas to a rear surface of a substrate body to float, rotate and suppress vibration to the substrate body under atmospheric or under depressurized conditions for forming a film of deposited material on a surface of the substrate body, said floating means including a plurality of floatation pores, a plurality of rotational pores, and a plurality of vibration suppression pores therein, said floatation pores, said rotational pores, and said suppression pores each being positioned and directed so as to promote one of floatation, rotation, and vibration suppression, respectively, via air flow control.